

**Remarks/Arguments**

Claims 1-2, 4, 6-19, and 29-34 are pending in the present application.

Claims 1-2, 4, 6-19, and 29-34 are rejected.

Claims 1, 2, 6-8, 10, 11, 13-17, 19, and 29-34 are amended herein.

Claims 3, 5 and 20-28 are previously cancelled.

1. **Rejections under 35 USC § 112, 1<sup>st</sup> paragraph**

In the Office Action, claims 29-34 were rejected under 35 USC section 112, first paragraph as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, in the Office Action, it was stated, “[i]n claim 29, the phrase ‘said surface energy is in a range of 25-40 milli-Newtons per meter’ is deemed new matter. On p.9 lines 1-11 of the specification, the claimed surface energy is mentioned but only has support from specific materials and not for all materials. The same issue applies to claims 30-34.”

To that end, Applicants have amended claims 29-34 to properly indicate the specific materials for the claimed surface energies. As a result, it is respectfully contended that claims 29-34 comport with the provisions of 35 USC section 112, first paragraph.

The Applicant respectfully asserts that the amendments to claims 29-34, and incorporated by reference in any claims depending therefrom, are not narrowing amendments made for a reason related to the statutory requirements for a patent that will give rise to prosecution history estoppel. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 56 U.S.P.Q.2d 1865, 1870 (Fed. Cir. 2000).

2. **Rejections under 35 USC § 103(a)**

In the Office Action, claims 1-2, 4, 6-19, and 29-34 were rejected under 35 USC section 103(a) as allegedly being unpatentable over United States patent 6,334,960 to Willson et

al. (“*Willson*”) in view of United States patent 6,607,173 to Westmoreland (“*Westmoreland*”) and Jpn. J. Appl. Phys., Vol. 42, pp. 3874-3876 entitled “Three Dimensional Nanoimprint Mold Fabrication by Focused-Ion-Beam Chemical Vapor Deposition” to Morita et al. (“*Morita*”).

a. Claim 1

Claim 1, as amended, defines a method of creating a template, the method including, *inter alia*, positioning a diamond-like composition layer on a body, forming the template; and patterning the diamond-like composition layer to include a plurality of protrusions and recesses, defining a patterning surface of the template, with the diamond like-composition layer having properties sufficient to be substantially transmissive of a predetermined wavelength and provide the patterning surface with a contiguous predetermined surface energy to minimize adhesion between the template and a material in contact therewith.

To that end, the prior art, taken alone or in combination, does not teach or suggest a layer of a template comprising a plurality of protrusions and recessions, defining a patterning surface, with the patterning surface having a contiguous predetermined surface energy. Willson teaches of a mold having a relief structure formed therein and further treating the relief structure of the mold with a surface modifying agent. See column 2-lines 53-54 and column 3, lines 60-61. Thus, the patterning layer of Willson is defined by the combination of the relief structure and the surface modifying agent, i.e. a bi-layer. Westmoreland teaches modifying a mold surface by forming a non-stick film on a planar surface of the mold and contacting a material to form a planar surface on a wafer. See column 2, lines 10-34. Morita teaches a surface having a plurality of surface energies. More specifically, Morita teaches a 3D mold positioned upon a silicon body (“*Morita template*”). See Fig. 7. It is therefore apparent from Fig. 7 of Morita that a patterning surface of the Morita template comprises portions of the protrusions of the 3D mold as well as regions of the silicon body. Thus, the patterning surface of the Morita template has differing materials associated therewith, i.e. diamond-like carbon and silicon; and, as

a result, the surface of the Morita template may have differing surface energies associated therewith.

Based upon the foregoing, Applicants respectfully assert that claim 1, as amended, is not rendered obvious by the prior art, taken alone or in combination. Further, Applicants respectfully assert that claims 2-9, 29, and 32, depending from claim 1, with their respective limitations, are not likewise rendered obvious by the prior art, taken alone or in combination.

b. Claim 10

Applicants respectfully assert that the arguments set forth above with respect to claim 1 applies with equal weight here and that claim 10, as amended, and claims 11-15, 30, and 33, depending from claim 10, with their respective limitations, define an invention suitable for patent protection.

c. Claim 16

In addition to the arguments set forth above with respect to claim 1, claim 16, as amended, defines a method of creating a template, the method including, *inter alia*, positioning a diamond-like composition layer on a body, forming the template; forming an electrically conductive layer between the body and the diamond-like composition layer having properties to be substantially transmissive of a predetermined wavelength; and patterning the diamond-like composition layer to include a plurality of protrusions and recesses and selective expose portions of the electrically conductive layer, defining the patterning surface of the template, with the diamond like-composition layer having properties sufficient to be substantially transmissive of a predetermined wavelength and provide the patterning surface with a contiguous predetermined surface energy to minimize adhesion between the template and a material in contact therewith.

The prior art is completely silent with respect to the template comprising an electrically conductive layer.

Based upon the foregoing, Applicants respectfully assert that claim 16, as amended, is not rendered obvious by the prior art, taken alone or in combination. Further, Applicants respectfully assert that claims 17-19, 31, and 34, depending from claim 16, with their respective limitations, are not likewise rendered obvious by the prior art, taken alone or in combination.

3. Conclusion

As a result of the foregoing, it is asserted by Applicants that claims 1-2, 4, 6-19, and 29-34 in the present Application are in condition for allowance, and Applicants respectfully request an allowance of such claims. Applicants respectfully request that the Examiner call Applicant's agent at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining issues.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "MD Carter", is positioned above the typed name.

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